

ABSTRACT

The present invention describes a network communication system which includes a first slave transceiver configured to communicate a plurality of TDMA data packets at different data rates to a second slave transceiver. The second slave transceiver is also configured to communicate a plurality of TDMA data packets at different data rates to the first slave transceiver. A master transceiver manages data communications between the first slave transceiver and the second slave transceiver. Each transceiver includes a data modulation unit, a transmitter, an antenna, and a receiver. The data modulation unit is configured to generate a plurality of signals having variable pulse repetition frequencies and different modulation techniques. The transmitter is coupled to the data modulation unit and the transmitter is configured to generate a pulse stream according to the data modulation unit. The transmitting antenna is coupled to the transmitter and the transmitting antenna is configured to transmit a plurality of ultra wide band base band signals. The receiver is configured to detect and demodulate said ultra wide band base band signals operating at variable pulse repetition frequencies and having different modulation methods.